

WHAT IS CLAIMED IS

5

1. An image forming device management system in which a customer system and a center system are connected by a public switched telephone network, the customer system including a data communication device connecting a plurality of image forming devices to the telephone network, the center system including a center management device connected to the telephone network, the data communication device comprising:

first message means for transmitting, on a normal message date for each of the respective image forming devices, a usage data of a corresponding one of the image forming devices to the center management device via the telephone network by using a call sent by the data communication device; and

second message means for transmitting, on an early message date that is earlier than the normal message date for a corresponding one of the image forming devices, a usage data of the corresponding one of the image forming devices to the center management device via the telephone network by using a call sent by the data communication device, and

the center management device comprising:

first message reception means for receiving, on the normal

message date for each of the respective image forming devices, the usage data of the corresponding one of the image forming devices that is transmitted by the first message means using the call sent by the data communication device;

5 second message reception means for receiving, on the early message date for each of the respective image forming devices, the usage data of the corresponding one of the image forming devices that is transmitted by the second message means using the call sent by the data communication device; and

10 remote management means for issuing a billing of a usage charge of the corresponding one of the image forming devices based on the usage data received by either the first message reception means or the second message reception means.

15

2. The image forming device management system according to claim 1, wherein the center management device comprises:

20 input means for inputting a holiday data of the center system and/or the customer system;

 calculation means for calculating an early message date for a corresponding one of the image forming devices based on the holiday data, input by the input means, and based on the normal
25 message date for the corresponding one of the image forming

early message date setting means for transmitting the early message date, calculated by the calculation means, to the data communication device via the telephone network, so that the calculated early message date is set in the data communication device.

holiday data setting means for transmitting a holiday data of the customer system, input by a corresponding one of the image forming devices, to the center management device by using a call sent by the data communication device, and

calculation means for calculating an early message date for the corresponding one of the image forming devices based on the holiday data, transmitted by the holiday data setting means, and based on the normal message date for the corresponding one of the image forming devices; and

early message date setting means for transmitting the early message date, calculated by the calculation means, to the data communication device via the telephone network so that the

calculated early message date is set in the data communication device.

5

4. The image forming device management system according to claim 2, wherein the early message date setting means transmits, on the normal message date for the corresponding one of the image forming devices, the early message date, calculated by the calculation means, to the data communication device via the telephone network, so that the calculated early message date is set in the data communication device.

15

5. The image forming device management system according to claim 1, wherein the data communication device further comprises message inhibition means for inhibiting the transmission of the usage data of the corresponding one of the image forming devices by the first message means only on the normal message date for the corresponding one of the image forming devices, which is subsequent to the early message date when the usage data is

transmitted to the center management device by the second message means.

5

6. The image forming device management system according to claim 1, wherein the normal message date is indicated by a 2-digit day number, and the early message date is indicated by a 4-digit month-and-day number.

10

7. The image forming device management system according to claim 1, wherein the normal message date is indicated by a 2-digit day number, and the early message date for each of the respective image forming devices is indicated by one of a plurality of 4-digit month-and-day numbers.

15

20

8. The image forming device management system according to claim 6, wherein the second message means transmits, by using the

25

5

10

15

20

25

customer system and a center system are connected by a public switched telephone network, the customer system including a data communication device connecting a plurality of image forming devices to the telephone network, the center system including a center management device connected to the telephone network, the data communication device comprising:

first message means for transmitting, on a normal message date for each of the respective image forming devices, a usage data of a corresponding one of the image forming devices to the center management device via the telephone network by using a call sent by the center management device; and

second message means for transmitting, on an early message date that is earlier than the normal message date for a corresponding one of the image forming devices, a usage data of the corresponding one of the image forming devices to the center management device via the telephone network by using a call sent by the center management device, and

the center management device comprising:

first message reception means for receiving, on the normal message date for each of the respective image forming devices, the usage data of the corresponding one of the image forming devices that is transmitted by the first message means using the call sent by the center management device;

second message reception means for receiving, on the early message date for each of the respective image forming devices, the

usage data of the corresponding one of the image forming devices that is transmitted by the second message means using the call sent by the center management device; and

remote management means for issuing a billing of a usage
5 charge of the corresponding one of the image forming devices based on the usage data received by either the first message reception means or the second message reception means.

10

11. The image forming device management system according to claim 10, wherein the center management device comprises:

input means for inputting a holiday data of the center system
15 and/or the customer system;

calculation means for calculating an early message date for a corresponding one of the image forming devices based on the holiday data, input by the input means, and based on the normal message date for the corresponding one of the image forming
20 devices; and

early message date setting means for transmitting the early message date, calculated by the calculation means, to the data communication device via the telephone network, so that the calculated early message date is set in the data communication
25 device.

12. The image forming device management system according to claim 10, wherein the center management device further comprises message inhibition means for inhibiting the reception of the usage data of the corresponding one of the image forming devices by the first message reception means only on the normal message date for the corresponding one of the image forming devices, which is subsequent to the early message date when the usage data is received by the second message reception means.

10

13. The image forming device management system according to claim 10, wherein the normal message date is indicated by a 2-digit day number, and the early message date is indicated by a 4-digit month-and-day number.

15

14. The image forming device management system according to claim 10, wherein the normal message date is indicated by a 2-digit day number, and the early message date for each of the respective image forming devices is indicated by one of a plurality of 4-digit month-and-day numbers.

20

25

15. A data communication device for use in an image forming
5 device management system in which a customer system and a center
system are connected by a public switched telephone network, the
customer system including a plurality of image forming devices
connected to the telephone network by the data communication
device, the center system including a center management device
10 connected to the telephone network, the data communication device
comprising:

first message means for transmitting, on a normal message
date for each of the respective image forming devices, a usage data
of a corresponding one of the image forming devices to the center
15 management device via the telephone network by using a call sent by
the data communication device; and

second message means for transmitting, on an early message
date that is earlier than the normal message date for a corresponding
one of the image forming devices, a usage data of the corresponding
20 one of the image forming devices to the center management device
via the telephone network by using a call sent by the data
communication device.

16. A data communication device for use in an image forming device management system in which a customer system and a center system are connected by a public switched telephone network, the customer system including a plurality of image forming devices connected to the telephone network by the data communication device, the center system including a center management device connected to the telephone network, the data communication device comprising:

first message means for transmitting, on a normal message date for each of the respective image forming devices, a usage data of a corresponding one of the image forming devices to the center management device via the telephone network by using a call sent by the center management device; and

second message means for transmitting, on an early message date that is earlier than the normal message date for a corresponding one of the image forming devices, a usage data of the corresponding one of the image forming devices to the center management device via the telephone network by using a call sent by the center management device.

17. The data communication device according to claim 15 or

16, further comprising holiday data setting means for transmitting a holiday data, input by a corresponding one of the image forming devices, to the center management device via the telephone network.

5

18. The data communication device according to claim 15 or 16, further comprising message inhibition means for inhibiting the transmission of the usage data of the corresponding one of the image forming devices by the first message means only on the normal message date for the corresponding one of the image forming devices, which is subsequent to the early message date when the usage data is transmitted to the center management device by the second message means.

19. The data communication device according to claim 15 or claim 16, further comprising:

calculation means for calculating an early message date for a corresponding one of the image forming devices based on a holiday data input by the corresponding one of the image forming devices, and based on the normal message date for the corresponding one of

the image forming devices; and

early message date setting means for transmitting the early message date, calculated by the calculation means, to the center management device via the telephone network, so that the calculated
5 early message date is set in the center management device.

10 20. A management method for an image forming device management system including a customer system and a center system linked together by a public switched telephone network, the customer system including a plurality of image forming devices and a data communication device connected to the image forming
15 devices, the center system including a data management device connected to the data communication device via the telephone network, the management method comprising the steps of:

transmitting, on an early message date that is earlier than a normal message date for a corresponding one of the image forming
20 devices, a usage data of the corresponding one of the image forming devices from the data communication device to the center management device via the telephone network by using a call sent by the data communication device;

receiving, on the early message date for each of the respective
25 image forming devices, the usage data of the corresponding one of

the image forming devices that is transmitted by the data communication device, at the center management device, using the call sent by the data communication device; and

issuing a billing of a usage charge of the corresponding one of
5 the image forming devices, at the center management device, based
on the usage data received by the center management device.

10

15

20

25